

What is claimed is:

Sub 1. A substantially purified new glutathione S-transferase (GSTS) comprising the amino acid sequence of SEQ ID NO:1 or a fragment of SEQ ID NO:1.

5 Sub 2. A substantially purified variant of GSTS having at least 90% amino acid identity to the amino acid sequence of claim 1.

10 3. An isolated and purified polynucleotide sequence encoding the GSTS of claim 1.

15 4. An isolated and purified polynucleotide variant having at least 90% polynucleotide identity to the polynucleotide sequence of claim 3.

5. A composition comprising the polynucleotide sequence of claim 3.

6. An isolated and purified polynucleotide sequence which hybridizes under stringent conditions to the polynucleotide sequence of claim 3.

20 7. An isolated and purified polynucleotide sequence which is complementary to the polynucleotide sequence of claim 3.

8. An isolated and purified polynucleotide sequence comprising SEQ ID NO:2 or a fragment of SEQ ID NO:2.

25 9. An isolated and purified polynucleotide variant having at least 90% polynucleotide identity to the polynucleotide sequence of claim 8.

30 10. An isolated and purified polynucleotide sequence which is complementary to the polynucleotide sequence of claim 8.

11. An expression vector containing at least a fragment of the polynucleotide sequence of claim 3.

12. A host cell containing the expression vector of claim 11.

13. A method for producing a polypeptide comprising the amino acid sequence of SEQ ID NO:1 or a fragment of SEQ ID NO:1, the method comprising the steps of:

(a) culturing the host cell of claim 12 under conditions suitable for the expression of the polypeptide; and

(b) recovering the polypeptide from the host cell culture.

14. A pharmaceutical composition comprising the GSTS of claim 1 in conjunction with a suitable pharmaceutical carrier.

15. A purified antibody which specifically binds to the GSTS of claim 1.

16. A purified agonist of the GSTS of claim 1.

17. A purified antagonist of the GSTS of claim 1.

18. A method for treating or preventing an immune response, the method comprising administering to a subject in need of such treatment an effective amount of the antagonist of claim 15.

19. A method for treating or preventing a cancer, the method comprising administering to a subject in need of such treatment an effective amount of the antagonist of claim 15.

20. A method for detecting a polynucleotide encoding GSTS in a biological sample containing nucleic acid material, the method comprising the steps of:

(a) hybridizing the polynucleotide of claim 7 to the nucleic acid material of the biological sample, thereby forming a hybridization complex; and

(b) detecting the hybridization complex, wherein the presence of the hybridization complex correlates with the presence of a polynucleotide encoding GSTS in the biological sample.

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21. The method of claim 20 wherein the nucleic acid material is amplified by the polymerase chain reaction prior to the hybridizing step.

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